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10/068,062	02/05/2002	Ming-Hui Chou	P-3641.177	8329

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EXAMINER

CHIN, BRAD Y

ART UNIT	PAPER NUMBER
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1744

DATE MAILED: 03/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/068,062

Applicant(s)

CHOU ET AL.

Examiner

Brad Y. Chin

Art Unit

1744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

DETAILED ACTION

***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the feature of the guiding plates oriented to guide solution flow toward the center of the baffle must be shown or the feature(s) canceled from the claim(s). Applicant's Figures 2 and 3 fail to adequately show such feature. Examiner suggests that Applicant provides a cross-sectional view of the separation device showing the feature of the guiding plates to guide solution flow toward the center of the baffle. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

2. Claims 1-20 are objected to because of the following informalities:

In claim 1, line 7, Applicant should amend the claim language to read, "...communicating with the tank".

In claim 5, line 2, Applicant should amend the claim language to read, "...multiple first extraction pipes".

In claim 7, Applicant claims that the extraction pipes in the top precipitation zone are inclined 10 to 20 degrees relative to the water level. In the specification, Applicant teaches that the extraction pipes in the top precipitation zone are inclined 10 to 20 degrees from vertical to the surface level. It is believed that Applicant should amend claim 7 to describe the orientation of the extraction pipes in the top precipitation zone in relation to the vertical, rather than the water level.

In claim 15, line 3, Applicant should amend the claim language to read, "...to drive the first stirring blades..."

In claim 16, line 8, Applicant should add the conjunction, "and".

In claim 18, line 2, Applicant should amend the claim language, "spatially \*parted" to "spatially parted".

In claim 18, line 3, Applicant should add the conjunction, "and".

Appropriate correction is required.

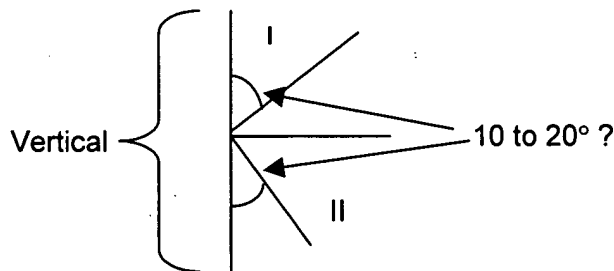
### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Art Unit: 1744

3. Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant fails to particularly describe the orientation of the extraction pipes in the top precipitation zone in relation to "from vertical to the surface level". Examiner is uncertain whether the extraction pipes are oriented 10 to 20 degrees in the direction of Quadrant I or Quadrant II.



### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 1 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Poole [U.S. Patent No. 2,273,660].

Regarding claim 1, Poole teaches a separation device, comprising: a tank (See Figure 3; upright vessel or tower 46) with multiple stirring zones (See Figure 3; series of mixing arms or paddles 48), multiple precipitation zones alternately arranged with the stirring zones (See Figure 3; See Specification, p. 6, col. 2, lines 8-16 – one or more annular catch basins 57 alternately arranged with the series of mixing arms or paddles 48), an outlet in a top portion of the tank (See Figure 3; discharge pipe 53), an inlet defined adjacent to the outlet (See Figure 3; inlet pipe 62), and a water inlet defined in the bottom portion of the tank (See Figure 3; solvent inlet pipe 50); and a collecting tank engaged with and communicating with the tank (See Figure 3; See Specification, p. 6, col. 2, lines 20-23 – this heavier material may be drawn off in any suitable manner as by pipes 58, which may be discharged into a suitable receptacle, e.g. a collecting tank for the precipitation), wherein each precipitation zone has an extraction pipe (pipes 58) and each stirring zone has stirring blades (mixing arms or paddles 48).

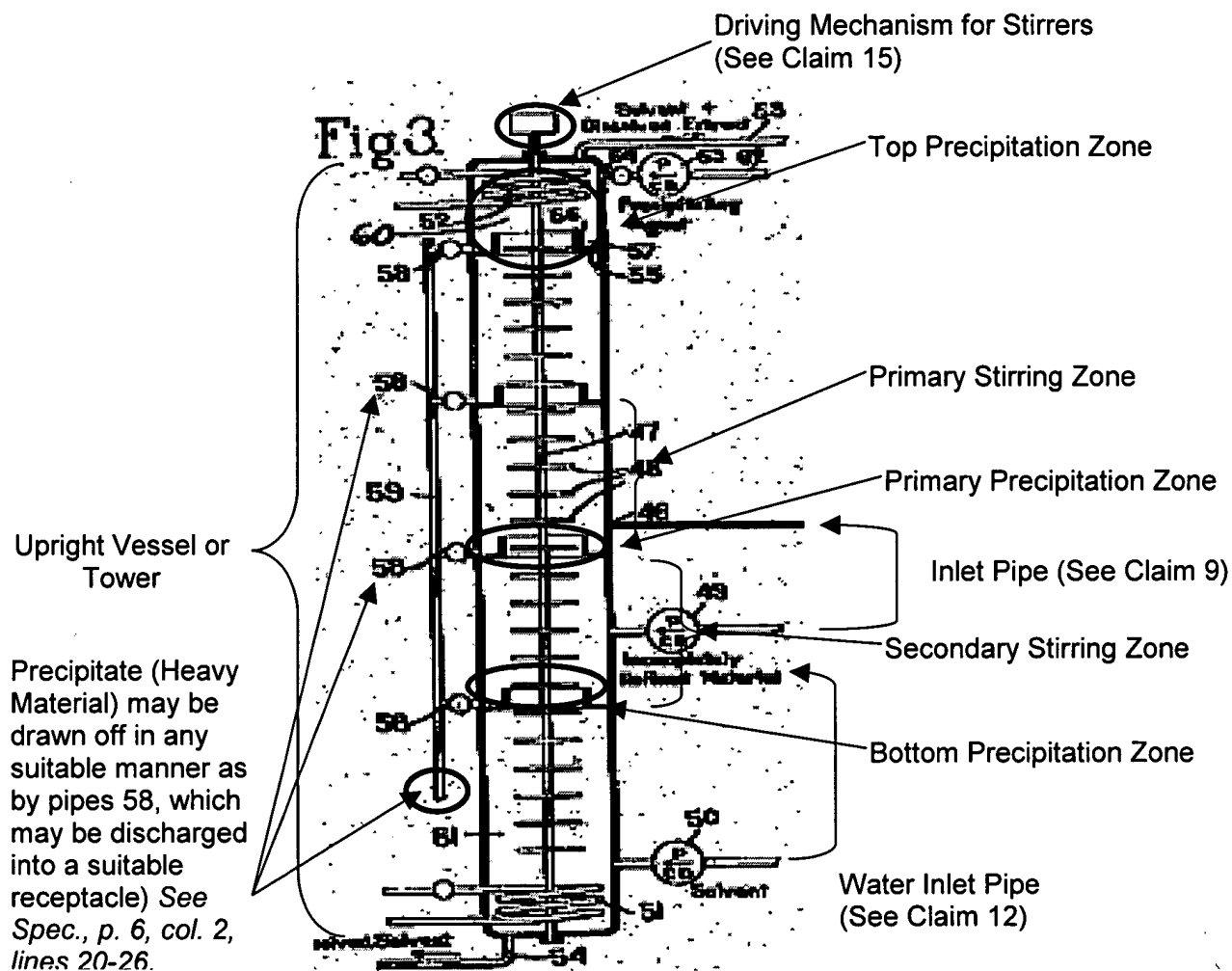
Poole fails to teach that each precipitation zone has multiple extraction pipes. It would have been obvious to one of ordinary skill in the art to provide each precipitation zone with multiple extraction pipes because multiple extraction pipes would allow for a larger concentration of precipitate or heavy material to be collected in the collection tank.

Regarding claim 4, Poole teaches the separation device as identified in claim 1 above, wherein the separation device comprises multiple alternating stirring and precipitation zones (See Figure 3 below; See Specification, p. 6, col. 1, line 59 to col. 2, line 16 – series of mixing arms or paddles 48 and one or more annular catch basins provided intermediate of the length of the tower). Figure 3 discloses one embodiment with four (4) stirring zones alternately arranged with four (4) precipitation zones. As described in the specification, Poole could comprise only two (2) stirring zones alternately arranged with three (3) precipitation zones. Thus, Poole further teaches the separation device as claimed in claim 1, wherein the tank (upright vessel or tower

Art Unit: 1744

46) is sequentially divided into a top precipitation zone, a primary stirring zone, a primary precipitation zone, a secondary stirring zone, and a bottom precipitation zone (See labeled Figure 3 below).

Poole fails to disclose a concentration zone, wherein the concentration zone is defined in the collection tank. It would have been obvious to one of ordinary skill in the art at the time the invention was made that the collection tank (See Specification, p. 6, col. 2, line 23 – suitable receptacle), as described in claim 1 above, would comprise an area within the receptacle suitable for holding the precipitate (heavy material) withdrawn from each precipitation zone.



Poole [U.S. Patent No. 2,273,660] Figure 3

5. Claims 2-3 and 5-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Poole, as applied to in claim 1 above, and further in view of Shankwitz et. al. [U.S. Patent No. 6,508,583].

Regarding claim 2, Poole teaches the separation device as identified in claim 1 above in paragraph 4. Poole fails to teach that the collection tank is conical. Shankwitz teaches a conical collection tank (See Figure 1; See Specification, col. 2, lines 56-64 – vessel 10 including vertical cylindrical tank 1 with inclined surfaces 5 that form an interior 6 for holding a suspension of solids in liquid, where in a preferred embodiment the bottom 4 has inclined straight-line surfaces, i.e. a conical shape of approximately 15 degrees, as shown). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the conical collection tank of Shankwitz because such a conical collection tank functions as a “suitable receptacle” for collecting the withdrawn precipitate carried by pipes 58 from the upright vessel or tower 46.

Regarding claim 3, Poole teaches the separation device as identified in claim 1 above in paragraph 4 and in claim 2 as aforementioned, wherein the separation device comprises multiple alternating stirring and precipitation zones (See Figure 3; See Specification, p. 6, col. 1, line 59 to col. 2, line 16 – series of mixing arms or paddles 48 and one or more annular catch basins provided intermediate of the length of the tower. Figure 3 discloses an embodiment with four (4) stirring zones alternately arranged with four (4) precipitation zones. As described in the specification, Poole could comprise only two (2) stirring zones alternately arranged with three (3) precipitation zones. Thus, Poole further teaches the separation device as claimed in claim 1, wherein the tank (upright vessel or tower 46) is sequentially divided into a top precipitation



Art Unit: 1744

zone, a primary stirring zone, a primary precipitation zone, a secondary stirring zone, and a bottom precipitation zone (See labeled Figure 3 above).

Poole fails to disclose a concentration zone, wherein the concentration zone is defined in the collection tank. It would have been obvious to one of ordinary skill in the art at the time the invention was made that the collection tank (See Specification, p. 6, col. 2, line 23 – suitable receptacle), as described in claims 1 and 2 above, would comprise an area within the receptacle suitable for holding the collected precipitate (heavy material) withdrawn from each precipitation zone.

Regarding claim 5, Poole teaches the separation device as identified in claim 1 above in paragraph 4 and in claims 2 and 3 as aforementioned. Poole fails to teach that the top precipitation zone has multiple extraction pipes. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide each precipitation zone with multiple extraction pipes because multiple extraction pipes would allow for a larger concentration of precipitate or heavy material to be collected in the collection tank.

Regarding claim 6, Poole teaches the separation device as identified in claim 1 above in paragraph 4 and in claims 2, 3, and 5 as aforementioned. It is inherent that the extraction pipes in Poole (discharge pipes 58) would have a diameter and a length. Poole teaches that the discharge pipes 58 communicate with a suitable receptacle for discharging the precipitate (heavy material) from the upright vessel or tower 46 (See Specification, p. 6, col. 2, lines 20-26) into the suitable receptacle for collection. Although Poole fails to teach particularly that each extraction pipe has a length 5-20 times larger than the diameter, it would have been obvious to one of ordinary skill in the art to provide a suitable length, e.g. a length that is 5-20 times larger than the diameter of the pipe, for the discharge pipes based on the height of the tank and/or the

Art Unit: 1744

distance that the suitable receptacle is located away from the discharge points for each precipitation zone in the tank.

Regarding claim 7, Poole teaches the separation device as identified in claim 1 above in paragraph 4 and in claims 2, 3, and 5 as aforementioned. Poole fails to teach that the extraction pipes are inclined for 10 to 20 degrees from vertical to the surface level. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the orientation of the discharge pipes in Poole at inclined angles, e.g. 10 to 20 degrees, from vertical to the surface level to direct the flow of precipitate from the discharge points along the height of the tank to the collection tank, e.g. the suitable receptacle, for collection and to prevent precipitate from standing in or clogging the flow of precipitate through the discharge pipes.

Regarding claim 8, Poole teaches the separation device as identified in claim 1 above in paragraph 4 and in claims 2 and 3 as aforementioned. Poole further teaches that the outlet is defined in the top precipitation zone at a side face of the tank (See Figure 3; discharge pipe 53 – See Specification, p. 6, col. 2, lines 2-6).

Regarding claim 9, Poole teaches the separation device as identified in claim 1 above in paragraph 4 and in claims 2 and 3 as aforementioned. Poole further teaches that the inlet is defined in the primary stirring zone (See Figure 3 above; feed pipe 49; See Specification, p. 6, col. 1, lines 63-66 – a feed pipe 49 preferably intermediate of its [the tank's] length through which the raw or incompletely refined substance [the water-soluble, non-water soluble composition] is introduced into the vessel, e.g. the feed pipe 49 would be positioned intermediate the length of the tower just above the primary precipitation zone in Figure 3 above, in the primary stirring zone).

Regarding claim 10, Poole teaches the separation device as identified in claim 1 above in paragraph 4 and in claims 2 and 3 as aforementioned. Poole fails to teach that the primary precipitation zone has multiple extraction pipes. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide each precipitation zone with multiple extraction pipes because multiple extraction pipes would allow for a larger concentration of precipitate or heavy material to be collected in the collection tank.

It is inherent that the extraction pipes in Poole (discharge pipes 58) would have a diameter and a length. Poole teaches that the discharge pipes 58 communicate with a suitable receptacle for discharging the precipitate (heavy material) from the upright vessel or tower 46 (See Specification, p. 6, col. 2, lines 20-26) into the suitable receptacle for collection. Although Poole fails to teach particularly that each extraction pipe has a length 20-200 times larger than the diameter, it would have been obvious to one of ordinary skill in the art to provide a suitable length, e.g. a length that is 20-200 times larger than the diameter of the pipe, for the discharge pipes based on the height of the tank and/or the distance that the suitable receptacle is located away from the discharge points for each precipitation zone in the tank.

Regarding claim 11, Poole teaches the separation device as identified in claim 1 above in paragraph 4 and in claims 2, 3, and 10 as aforementioned. Poole teaches that the extraction pipes associated with the primary precipitation zone are vertical with respect to the water level (See Figure 3; discharge pipes 58 and header 59 are vertical, e.g. parallel to the height of the tank).

Regarding claim 12, Poole teaches the separation device as identified in claim 1 above in paragraph 4 and in claims 2 and 3 as aforementioned. Poole teaches that the water inlet is defined in the secondary stirring zone (See Figure 3 above; pipe 50 – See Specification, p. 6, col. 1, lines 66-69 – preferably at a point beneath the feed of the raw material and at a suitable

Art Unit: 1744

distance above the bottom of the vessel, e.g. the pipe 50 positioned in the second stirring zone beneath the feed pipe 49 and at a suitable distance above the bottom of the vessel).

Regarding claim 13, Poole teaches the separation device as identified in claim 1 above in paragraph 4 and in claims 2 and 3 as aforementioned. Poole fails to teach that the bottom precipitation zone has multiple extraction pipes. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide each precipitation zone with multiple extraction pipes because multiple extraction pipes would allow for a larger concentration of precipitate or heavy material to be collected in the collection tank.

It is inherent that the extraction pipes in Poole (discharge pipes 58) would have a diameter and a length. Poole teaches that the discharge pipes 58 communicate with a suitable receptacle for discharging the precipitate (heavy material) from the upright vessel or tower 46 (See Specification, p. 6, col. 2, lines 20-26) into the suitable receptacle for collection. Although Poole fails to teach particularly that each extraction pipe has a length 5-20 times larger than the diameter, it would have been obvious to one of ordinary skill in the art to provide a suitable length, e.g. a length that is 5-20 times larger than the diameter of the pipe, for the discharge pipes based on the height of the tank and/or the distance that the suitable receptacle is located away from the discharge points for each precipitation zone in the tank.

Regarding claim 14, Poole teaches the separation device as identified in claim 1 above in paragraph 4 and in claims 2 and 3 as aforementioned. Poole fails to teach that the collection tank has a bottom outlet for collecting precipitation. Shankwitz teaches the conical collection tank, which has a bottom outlet for collecting precipitate (See Figure 1; See Specification, col. 2, lines 56-64 – vessel 10 including vertical cylindrical tank 1 with inclined surfaces 5 that form an interior 6 for holding a suspension of solids in liquid, where in a preferred embodiment the

Art Unit: 1744

bottom 4 has inclined straight-line surfaces, i.e. a conical shape of approximately 15 degrees, as shown).

Regarding claim 15, Poole teaches the separation device as identified in claim 1 above in paragraph 4 and in claims 2 and 3 as aforementioned. Poole teaches that the second stirring zone has second stirring blades provided therein (See Figure 3 above; second stirring zone with mixing arms or paddles 48) and the tank (upright vessel or tower 46) has a motor mounted on top thereof and an axle (rotating vertical shaft 47) extending from the motor to drive the first stirring blades and the second blades (See Figure 3 above; See Specification, p. 6, col. 1, lines 58-63).

Regarding claim 16, Poole teaches the separation device as identified in claim 1 above in paragraph 4 and in claims 2 and 3 as aforementioned. Poole teaches the separation device of claim 3, wherein a baffle is provided between the top precipitation zone and primary stirring zone, the primary stirring zone and the primary precipitation zone, the primary precipitation zone and the secondary stirring zone, and between the secondary stirring zone and the bottom precipitation zone (See Figure 3; See Specification, p. 6, col. 2, lines 10-16 – horizontal base 55 fitting tightly within and secured to the cylindrical wall of the vessel and an upwardly extending annular flange 56 located at a suitable distance from the wall of the vessel to provide catch basin 57), wherein each baffle (pair of horizontal bases 55 and extending annular flanges 56) is secured to an inner face of the tank and each baffle has a central opening aligned with each other (See Figure 3; central opening is the area located between the two horizontal bases 55 and extending annular flanges 56), and wherein an annular gap is defined between a distal edge of the baffle and the inner face of the tank (See Figure 3 above; See Specification, p. 6, col. 2, lines 10-16 – annular gap defined between the annular flange 56 and the inner wall of the tank, e.g. the area defined as the catch basin 57).

Art Unit: 1744

Poole fails to teach that the baffle is secured to the inner face of the tank by a positioning plate, which is securely engaged with the inner face of the tank, and that the central opening has a tapered periphery formed on a periphery.

Poole teaches that the baffle is directly secured to the inner face of the tank. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the structure for attaching the baffle to the inner face of the tank by providing a positioning plate for securely attaching the baffle in Poole to the inner face of the tank absent any unexpected results.

Poole teaches a central opening defined between the set of horizontal bases 55 and annular flanges 56 that form the baffle. It would have been an obvious to one of ordinary skill in the art at the time the invention was made to have modified the annular flange of Poole in a tapered orientation allowing the collected precipitate to overflow into the descending stream in the next lower zone (See Specification, p. 6, col. 2, lines 17-20).

Regarding claim 17, Poole teaches the separation device as identified in claim 1 above in paragraph 4 and in claims 2-3 and 16 as aforementioned. Poole fails to teach the separation device as claimed in claim 16, wherein multiple guiding plates are securely provided on the inner face of the tank, and wherein the positioning plate to position the baffle between the top precipitation zone and the primary stirring zone is below the baffle and secured to the inner face of the tank. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Poole with additional baffles or catch basins ("guiding plates") – horizontal base 55 and annular flange 56 – providing multiple structures for collecting the deposited precipitate (Duplicating part for a multiple effect – *In re Harza*, 274 F.2d 669, 671, 124 USPQ 378, 380 (CCPA 1960); See Specification, p. 6, col. 2, lines 8-10 – one or more annular catch basins are provided intermediate of the length of the tower). Additionally, as

Art Unit: 1744

described in claim 16 above, it would have been obvious to secure the baffles of Poole to the inner face of the tank by providing a positioning plate absent any unexpected results.

Accordingly, it would have been obvious to orient the positioning plate below the baffle providing support to the underside of the baffle.

Regarding claims 18 and 19, Poole teaches the separation device as identified in claim 1 above in paragraph 4 and in claims 2-3 and 16-17 as aforementioned. Poole fails to teach that the guiding plate is spatially parted from the baffle between the top precipitation zone and the primary stirring zone and is on top of the baffle, and the positioning plate to position the baffle between the primary stirring zone and the primary precipitation zone is on top of the baffle and secured to the inner face of the tank. Poole further fails to teach that the guiding plate is spatially apart from the baffle between the primary stirring zone and the primary precipitation zone and is below the baffle.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have oriented the additional baffles or catch basins in relationship to each other to provide for an effective means of collecting deposited precipitate. Additionally, as described in claim 16 above, it would have been obvious to secure the baffles of Poole to the inner face of the tank by providing a positioning plate absent any unexpected results. Accordingly, it would have been obvious to orient the positioning plate below or on top of the baffle to provide support for the baffle against the inner face of the tank wall.

Regarding claim 20, Poole teaches the separation device as identified in claim 1 above in paragraph 4 and in claims 2-3 and 16-19 as aforementioned. While Poole fails to teach that the guiding plate has a width larger than a width of the annular gap, such appears to relate to the guidance of the precipitate to the center of the baffle. One of ordinary skill in the art at the time the invention was made would by routine experimentation determine the optimum width of

Art Unit: 1744

the additional baffle(s) in relation to the width of the annular gap created between the annular flange and the inner face of the tank wall, in order to facilitate the flow of the precipitate to the center area, located between the two sections of the baffle in Poole, allowing the collected precipitate to overflow into the next lower zone.

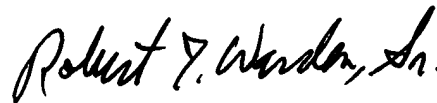
***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brad Y. Chin whose telephone number is 571-272-2071. The examiner can normally be reached on Monday – Friday, 8:00 A.M. – 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sun (John) Kim, can be reached at 571-272-1142. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

byc  
March 17, 2005



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